

IN THE CIRCUIT COURT OF THE
ELEVENTH JUDICIAL CIRCUIT IN
AND FOR DADE COUNTY, FLORIDA

MARIE J. FONTANA,

Plaintiff,

vs.

No. 00-01731

PHILIP MORRIS, INC., et al.,

Defendants.

COPY

73 West Flagler Street
Miami, Florida
April 2, 2001
10:15 a.m.

TRIAL

VOLUME 21

The above-styled cause came on for Trial
held before the Honorable THOMAS S. WILSON,
JR., Presiding Judge, pursuant to notice, at
the Dade County Courthouse, on the 2nd day of
April, 2001 at 10:15 a.m.

Taylor, Jenovic, White & Gendron

APPEARANCES:

On behalf of the Plaintiff:

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and
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On behalf of Defendants Philip Morris and Lorillard:

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1 On behalf of Defendant Brown & Williamson:

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BY: ANTHONY N. UPSHAW, ESQ.
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5
6 On behalf of Defendant Lorillard:

7 GREENBERG TRAURIG, P.A.
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8 BY: DAWN BEIGHEY GEORGIADES, ESQ.

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1 (THEREUPON, the following proceedings were held:)

2 THE COURT: Good morning. Everybody, have
3 a seat, please, relax.

4 Any new developments over the weekend?

5 MR. REILLY: Nothing earth-shattering.
6 But, Your Honor, I thought it would be a good
7 idea to inform you that plaintiff's counsel
8 obviously objected to Dr. Barry coming to
9 testify because of a concern about cumulative
10 testimony, and so we've decided not to risk
11 that and we're not going to call Dr. Barry.

12 THE COURT: What does that do as far as
13 shortening up this --

14 MR. REILLY: The second piece is, in light
15 of Mr. Geraghty's concerns that our flight
16 attendant expert might cross the line on
17 whether or not there's an issue of choice
18 involved or not, we decided not to risk that as
19 well.

20 And so we're not going to call our flight
21 attendant expert, because, clearly, an awful
22 lot of what she has to tell everybody has to do
23 with selection and choice and where you are in
24 the cabin and that sort of thing.

25 We don't want to create a problem there

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1 either. So this will be our last witness.

2 THE COURT: And we can -- how long is this
3 witness going to be?

4 MR. REILLY: Your Honor, my best guess is
5 that the direct will probably take the morning
6 or -- I'm a little slow, he's from Atlanta, so
7 it could be a little into the early afternoon.
8 And then I don't know how long
9 cross-examination is, but we will certainly,
10 unless Mr. Hunter anticipates some extremely
11 extended cross-examination, I would be
12 confident we'll finish him sometime today.

13 THE COURT: Okay.

14 So that puts us at a potential for
15 rebuttal case, number one, and probably final
16 arguments tomorrow.

17 MR. REILLY: Plaintiff's counsel have
18 provided us with a list of witnesses that
19 they -- I don't know whether they really intend
20 to call any of these people, but they've given
21 us a list of four people they say they would
22 like to call as rebuttal witnesses.

23 Obviously we have a problem with each and
24 every one of them, different problems with
25 different people.

1 THE COURT: Right. And they may change
2 their mind now that some of the witnesses
3 aren't here to rebut.

4 MR. REILLY: Probably. Don't know. They
5 need to tell us who they really intend to call,
6 and we will then have to discuss with Your
7 Honor whether they should be permitted to do
8 that at all.

9 THE COURT: We also need a charge
10 conference.

11 MR. REILLY: We need to talk about
12 instructions. We need an opportunity to argue
13 our motions again. And I think that's about
14 it.

15 THE COURT: How much time do you think is
16 necessary for final arguments per side?

17 MR. REILLY: Your Honor, we have Wednesday
18 reserved for it. I would say -- I certainly
19 don't think we need more than three hours a
20 side.

21 MR. HUNTER: How much?

22 MR. REILLY: Three.

23 MR. HUNTER: I'd say two.

24 MR. REILLY: We may be able to do it in
25 two.

1 THE COURT: I would think two would be
2 more realistic. Not that that's written in
3 stone by any stretch of the imagination.

4 MR. ENGRAM: Can we compromise and say two
5 and a half?

6 MR. REILLY: You can see the case has gone
7 into the second week, so everyone has become
8 quite reasonable.

9 THE COURT: Strange how that happens.

10 MR. REILLY: Two and a half hours, I'm
11 sure --

12 THE COURT: I think that would be
13 sufficient.

14 MR. REILLY: They have a good sense of
15 what this case is about now, I'm sure.

16 THE COURT: Oh, I think so.

17 Okay, Mr. Hunter, what are your thoughts
18 on this matter?

19 MR. HUNTER: I'm in agreement so far with
20 everything I've heard here.

21 THE COURT: What about the -- first off,
22 how long do you think your cross of this
23 witness is going to be?

24 MR. HUNTER: Half hour at the most, unless
25 something truly dramatic happens, and that I'm

1 not expecting.

2 MR. UPSHAW: Is this like last week or --

3 MR. CHUMBLEY: Hunter time.

4 MR. REILLY: We've got him a 9:00 flight.
5 I don't anticipate anything earth-shattering.

6 THE COURT: What about rebuttal?

7 MR. HUNTER: I have two, maybe three
8 witnesses; the combined testimony on direct
9 would be less than an hour with all of them.

10 THE COURT: So you think it would be
11 reasonable to --

12 MR. HUNTER: Of course, we're not ready to
13 start that until tomorrow.

14 THE COURT: We can discuss -- after we
15 finish this witness, we can let the jury go
16 home, then discuss what the -- or if there is a
17 rebuttal case.

18 MR. HUNTER: Yes, sir.

19 THE COURT: And do some preliminaries on a
20 charge conference as well. Because I've gotten
21 both sets of initial instructions, and I've
22 read those over.

23 MR. GERSON: If we're going to close on
24 Wednesday, there should be plenty of time
25 tomorrow to have a charge conference, deal with

1 motions, because our rebuttal case will be
2 short.

3 MR. WEINSTEIN: Judge, might I say a word?

4 THE COURT: Without your word we would be
5 at a loss.

6 MR. WEINSTEIN: The only reason he says
7 it's going to be a half hour is because they
8 decided I wasn't going to cross-examine him, I
9 think. Although we're not sure about that yet,
10 but I figure I kept quiet so long I might as
11 well stay there.

12 Judge, I was, regrettably, I must say I
13 was very close to the end of my argument,
14 because I could go on for a lot longer. But I
15 was pretty close to the end.

16 THE COURT: I've read all your cases now.

17 MR. WEINSTEIN: Right. I did have some
18 more case, and you said we'd continue it
19 another time on the judicial notice.

20 THE COURT: We'll take care of that this
21 afternoon.

22 MR. WEINSTEIN: And it could be handled
23 either -- well, it would be up to the Court as
24 to when that would be, the jury should be
25 instructed should you find on that basis that

1 they should be instructed.

2 I was waiting for the Court to ask when I
3 should continue.

4 THE COURT: Let's get this witness out of
5 the way and then we'll take care of that issue.

6 MR. WEINSTEIN: Thank you, Your Honor.

7 THE COURT: I guess Todd is bringing the
8 jury up right now.

9 MR. GERSON: Mr. Reilly, are there any
10 exhibits that you're going to use with this
11 witness?

12 MR. REILLY: Medical records, model.

13 THE COURT: Are we all ready?
14 One second.

15 MR. REILLY: We have one other thing as
16 part of our examination. A Slinky.

17 MR. GERSON: Is there a computer
18 demonstration?

19 MR. REILLY: Nothing that's -- just
20 medical records.

21 THE COURT: Are we ready to proceed then?

22 MR. REILLY: Yes, Your Honor.

23 THE COURT: Why don't you have your
24 witness come in.

25 (The jurors entered the courtroom.)

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1 THE COURT: Morning, ladies and gentlemen.
2 Hope everybody had a good weekend.

3 Let the record reflect all our jurors are
4 present and accounted for and we're ready to
5 proceed.

6 Mr. Reilly, who is the next witness?

7 MR. REILLY: Dr. Roland Ingram, Your
8 Honor.

9 THE COURT: Dr. Ingram, come up. As soon
10 as you get seated, I'll swear you in and then
11 we'll get you in and out as quickly as
12 possible.

13 Thereupon:

14 ROLAND INGRAM, M.D.
15 been called as a witness, was duly sworn, examined,
16 and testified as follows:

17 DIRECT EXAMINATION

18 THE COURT: Please state your full name
19 spell your last name for the reporter, and your
20 present address.

21 THE WITNESS: Roland Harrison Ingram,
22 I-N-G-R-A-M, Jr., [DELETED]
23

24 THE COURT: Thank you, sir, your witness.
25

DIRECT EXAMINATION

BY MR. REILLY:

Q. Dr. Ingram, would you tell these folks on the jury if you are a physician?

A. Yes, I am.

Q. Can you tell me what kind of doctor you are?

A. Internal medicine specialist with a subspecialty in lung diseases.

Q. All right. You are as soft spoken as I am. So if you would -- if you would --

A. Okay.

Q. Doctor, would you please tell these folks where you went to medical school?

A. I went to Yale University School of Medicine.

Q. And when did you graduate from Yale?

A. 1960.

Q. All right. And while you were at Yale in medical school, did you receive any awards for your performance in medical school?

A. Some, yes.

Q. Would you tell the jury what awards you received while you were in medical school?

A. Well, the first one was a thing, I think,

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1 called the Perkins Prize. And that was for the
2 first year, first position --

3 Q. Highest grade --

4 A. -- for the first year.

5 Q. -- first year medical student?

6 A. Yes. Then there was another one, the
7 Ramsey Award for the first two years.

8 Q. Highest scores at Yale in medical school
9 for the first two years running?

10 A. Yes. And then the last one was the
11 Campbell Award, which was for all four years.

12 Q. All right. Were you made a member of a
13 Medical Scholastic Honor Society while you were at
14 Yale?

15 A. Yes.

16 Q. And what was the name of that society?

17 A. Alpha, Omega, Alpha.

18 Q. Did you graduate from Yale cum laude?

19 A. Yes.

20 Q. Doctor, what did you -- strike that.

21 Did you perform medical research while you
22 were in medical school?

23 A. I did.

24 Q. Can you tell me what the topic of your
25 research was?

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1 A. Yes, it had to do with a certain kind of
2 cardiogram done on people who were normal, and those
3 with heart disease, angina pectoris, before and
4 after an exercise routine. And that was the basis
5 for my thesis.

6 Q. Doctor, this jury has heard several
7 physicians and others come to that witness stand and
8 talk about publication of scientific literature in
9 peer-reviewed journals. Can you tell this jury
10 whether or not, even before you were out of medical
11 school, if you had a publication accepted for -- I'm
12 sorry, a medical research paper accepted for
13 publication in a peer-reviewed journal before you
14 were even out of medical school?

15 A. Accepted, yes, I did.

16 Q. Was it published shortly after that?

17 A. Yes.

18 Q. Doctor, after you completed medical
19 school, did you do an internship?

20 A. I did.

21 Q. And where did you do that?

22 A. At what was known then as the Peter Bent
23 Brigham Hospital, since it is part of a merger of
24 several hospitals now called Brigham and Women's.

25 Q. And what -- what institution of higher

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1 education is that associated with?

2 A. Harvard.

3 Q. So you did your internship at Harvard?

4 A. Yes.

5 Q. And what was your internship about?

6 A. Internal medicine, which is diseases of
7 adults, medical diseases, that is nonsurgical
8 diseases of adults.

9 Q. One-year internship?

10 A. Yes.

11 Q. And while you were performing your
12 internship, were you studying both pulmonology,
13 cardiology, all aspects of internal medicine?

14 A. General medicine that puts you in contact
15 with all of the subspecialties.

16 Q. After you completed your internship, what
17 did you do?

18 A. At that time everyone was required to give
19 two years of uniformed service, that is, every
20 person with an M.D. degree. So I went with the
21 Public Health Service to the Atomic Bomb Casualty
22 Commission in Hiroshima, Japan.

23 Q. Did you do research while you were there?

24 A. I did.

25 Q. What kind of research did you do?

1 A. The purpose of the organization was
2 so-called epidemiological -- I'm sure people have
3 heard about that -- studying large populations to
4 see if you can get some information about trends for
5 disease and so forth, comparing the people who were
6 exposed to radiation to those who were not as a
7 result of the atomic bomb.

8 Q. Did you publish on that research?

9 A. Yes, I did. There were two or three. One
10 was the Leukemia Study, which resulted in
11 publication, for a very interesting clinical
12 observation that we followed through very carefully.

13 We had an article in the New England
14 Journal of Medicine that was published, and then a
15 technical report, it was part of the National
16 Academy of Sciences, which was part of the
17 organization at that time running the Atomic Bomb
18 Casualty Commission.

19 Q. All right. Doctor, after you did your
20 tour of duty in Japan, did you come back to the
21 United States?

22 A. I did.

23 Q. And did you enter a residency program?

24 A. I did.

25 Q. And where did you perform your residency

1 program?

2 A. For one year of residency at Barnes
3 Hospital, which is the major affiliate of the
4 Washington University School of Medicine in St.
5 Louis.

6 Q. How many years was your residency all
7 together?

8 A. If you take internship and two years of
9 internal medicine residency, you'd say that was a
10 three-year package.

11 Q. Where did you do your second year of
12 residency?

13 A. I returned to my old stomping ground at
14 New Haven, at Yale, where I completed my internal
15 medicine training.

16 Q. You anticipated my next question. Your
17 residency was in internal medicine?

18 A. Internal medicine.

19 Q. And did you follow that up with a
20 fellowship?

21 A. I did.

22 Q. And where did you do your fellowship?

23 A. The first part of it I did at Yale, and
24 the second part at Columbia university.

25 Q. That's a fellowship?

1 A. Yes.

2 Q. Can you tell me who sponsored your first
3 year of fellowship?

4 A. It was an American Lung Association
5 fellowship grant.

6 Q. And who sponsored your second year?

7 A. The National Institutes of Health.

8 Q. And what was your fellowship in?

9 A. First I was in respiratory physiology.
10 And the second part was in really circulatory
11 physiology, because I was interested in the
12 circulation of the lung. I had studied the
13 circulation of the air, now I wanted to put the
14 circulation of the blood to get a better feeling
15 about what this organ was all about.

16 Q. Was your fellowship focused entirely on
17 the study of the lung?

18 A. Oh, no, no. You have a very definite
19 clinical component to it.

20 Q. So it wasn't just researching the lung?

21 A. No.

22 Q. It was taking care of patients as well?

23 A. Yes.

24 Q. You had taken care of -- strike that.

25 Had you taken care of patients during your

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1 residency?

2 A. I did, yes.

3 Q. And you took care of patients during your
4 fellowship?

5 A. Yes.

6 Q. What kinds of patients did you take care
7 of during your residency?

8 A. General internal medicine, some people
9 with blood disorders, some with intestinal
10 disorders, some with heart disorders, the whole
11 gamut.

12 At that time, dermatology was part of
13 internal medicine and so was neurology, that is, the
14 study of the nervous system. We took care of all
15 those things, and we were helped by subspecialists
16 who would guide us through.

17 Q. During your fellowship did you take care
18 of patients in the area of pulmonology?

19 A. Yes.

20 Q. During this period of your residency and
21 fellowship were you taking care of patients who
22 suffered from sarcoidosis?

23 A. Yes.

24 Q. Emphysema?

25 A. Yes.

1 Q. Chronic obstructive pulmonary disease?

2 A. Yes.

3 Q. Chronic bronchitis?

4 A. Yes.

5 Q. Maybe this would be a good time for you to
6 explain to the jury what that constellation of
7 diseases references: Emphysema, chronic bronchitis
8 chronic obstructive pulmonary disease.

9 A. Chronic bronchitis is based on what you
10 say to the doctor in response to a question.

11 Do you cough and raise phlegm? And the
12 answer is yes.

13 Do you do it as much as three months out
14 of a year, calendar year? And if your answer is
15 yes, you're ready to go to the next question.

16 Has this happened for the last two years
17 or beyond, or longer? If the answer is yes, you
18 then have chronic bronchitis by definition.

19 Cough, raising phlegm for more than three
20 months, for more than two years in succession,
21 that's the diagnosis. So it's a clinical historical
22 diagnosis.

23 Emphysema is on the other end of it, and
24 it has to do with a disordered structure of the
25 lung, that is, abnormal dilatation, swelling or

1 increased in size of the terminal air sacs with loss
2 of the tissue mesh that makes the lung what it is.
3 So it is based on form, anatomy.

4 Now that we have CT scans, CT can make the
5 diagnosis. Before that you had -- to be sure, you
6 had to have the entire lung sectioned and looked at.

7 So it's based on the so-called morphology,
8 study of form. And this is based on clinical
9 history.

10 In the middle is the common ground of
11 obstruction. And that means you have trouble
12 getting air into and out of the lung, especially air
13 out of it. Airways obstruct air flow. So you
14 cannot empty the lungs normally. So that is a
15 functional assessment, how much obstruction do you
16 have? So it varies in this entire spectrum, but
17 most people with chronic obstructive pulmonary
18 disease have a little of both or a lot of one and
19 some of the other.

20 So it is a spectrum from chronic
21 bronchitis to emphysema which can easily co-exist,
22 the end result of both will be obstruction to air
23 flow, having trouble getting the air out.

24 Q. This jury has heard about obstructive lung
25 disease and restrictive lung disease, and we'll talk

1 about that a little more a little later.

2 Doctor, these definitions that you've just
3 given the jury for these diseases, are they just
4 your definition?

5 A. No, no. They're agreed upon pretty much
6 by all of the professional organizations, the
7 American Thoracic Society from the American side,
8 the European Respiratory Society from the European.
9 The Australian, New Zealand Thoracic Society. The
10 list goes on, but those are the three major ones.

11 Q. Doctor, after you completed this
12 fellowship, did you sit for any examinations for
13 what they call board certification?

14 A. I did.

15 Q. Can you tell the jury what boards, board
16 examinations you sat for?

17 A. First was internal medicine, which is the
18 parent discipline for all the medical
19 subspecialties. So I sat for the internal medicine
20 boards. And after that I sat for the pulmonary, the
21 lung disease boards.

22 Q. And did you become board-certified in both
23 those areas?

24 A. I did.

25 Q. Internal medicine and pulmonology?

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1 A. I did.

2 Q. Do you recall what year you became
3 board-certified in internal medicine?

4 A. I think it was in the late '60s.

5 Q. How about pulmonology?

6 A. I believe that was the early '70s.

7 Q. After you completed your fellowship, what
8 did you do?

9 A. Well, as my wife said, I got a real job.

10 Q. And what was your real job?

11 A. My real job was on the faculty at Emory
12 University School of Medicine in Atlanta.

13 Q. So you were teaching medical students?

14 A. Medical students, interns, residents,
15 fellows.

16 Q. And what were you teaching them?

17 A. Teaching them lung disease, how to read a
18 chest X-ray, teaching them physiology, teaching them
19 how to assess clinical problems, how to make
20 diagnoses.

21 Q. In addition to teaching, were you also
22 practicing pulmonology?

23 A. I was.

24 Q. And where were you doing that?

25 A. Well, it was at Grady Memorial Hospital,

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1 which to someone from Miami would be pretty much
2 equivalent to Jackson Memorial. It was a big,
3 two-county public hospital, served by two counties.

4 Q. What was your capacity or title at Grady?

5 A. Well, it wasn't long before I became chief
6 of the lung section, pulmonary section at Grady.

7 Q. In charge of all the physicians who were
8 caring for all the patients with pulmonology
9 problems?

10 A. Yes.

11 Q. Doctor, did you become a full professor at
12 Emory?

13 A. I did.

14 Q. How long did that take?

15 A. I'm not sure. I think it was fairly --
16 three or four years, if I remember correctly.

17 Q. Did you stay at Emory?

18 A. No, I didn't.

19 Q. Where did you go from Emory?

20 A. Well, an opportunity came up to return to
21 Brigham as the chief of pulmonary and critical care
22 service there. So I did. I accepted that position.

23 Q. Did that make you an associate professor
24 at the Harvard School of Medicine?

25 A. It did. And the exchange rate at that

1 time was one Emory professorship was equal to one
2 Harvard associate professorship. Marks and dollars
3 on the sliding scale.

4 Q. So you became an associate professor of
5 pulmonology at Harvard?

6 A. Of internal medicine, with a specialty in
7 pulmonology.

8 Q. Before I leave Atlanta, can you tell these
9 folks, when you were in charge of the pulmonary
10 practice at Grady, if you were seeing patients
11 suffering sarcoidosis?

12 A. Oh, indeed I was.

13 Q. Is there a significant population of
14 patients suffering that disease there?

15 A. Yes, there was.

16 Q. Were you also caring for patients who
17 suffered from emphysema?

18 A. Yes.

19 Q. From chronic bronchitis?

20 A. Yes.

21 Q. Chronic obstructive pulmonary disease?

22 A. Yes.

23 Q. How long were you a professor of
24 pulmonology at Harvard?

25 A. Well, I was made a full professor in the

1 late '80s. My total span of time there was 16
2 years. Is that what you're asking me?

3 Q. Yes. So you taught pulmonology at Harvard
4 Medical School until 1989, is that right?

5 A. 1989, that's correct.

6 Q. During your years as a professor at both
7 Emory and Harvard, did you do medical research?

8 A. Yes, I did.

9 Q. Was there a particular area of emphasis
10 for your medical research?

11 A. For the clinical part of it there was.
12 And it was mainly asthma, but to some extent,
13 chronic obstructive lung disease as well.

14 Q. Did you publish in peer-reviewed journals
15 the results of your research?

16 A. I did.

17 Q. Your professorship at Harvard, was that
18 what they called a tenured position?

19 A. It was.

20 Q. Could you explain to the jury what that
21 means?

22 A. That means that you got a job for life,
23 unless you do something terribly immoral or illegal.

24 Q. Did you do either of those things?

25 A. No, no. I didn't.

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1 Q. While you were at Harvard, were you
2 granted an endowed chair?

3 A. I was.

4 Q. Did I say that right, granted an endowed
5 chair?

6 A. Yes. I occupied one, so, yes.

7 Q. Would you explain to these jurors what
8 that means?

9 A. Well, if someone wishes to endow a chair
10 at a university, they give a certain sum of money
11 that is put into the endowment funds. And the
12 income from that supports the position at the
13 university. And it's pretty common, now it's
14 getting more common.

15 So it honors somebody who donated the
16 money, or it honors someone who didn't donate the
17 money, but who had a great deal of influence over
18 the education and life of the people connected with
19 that university.

20 Q. Doctor, while you were at Harvard, were
21 you also treating patients who suffered from
22 sarcoidosis?

23 A. I was.

24 Q. Chronic obstructive pulmonary disease?

25 A. Yes.

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1 Q. Emphysema?

2 A. Yes.

3 Q. Chronic bronchitis?

4 A. Yes.

5 Q. Were there as many folks suffering
6 sarcoidosis in Boston as there had been down in
7 Atlanta?

8 A. No.

9 Q. Why is it a more common illness in Atlanta
10 than it is in Boston?

11 A. Well, the incidence in blacks is greater
12 than the incidence in whites. And there were
13 proportionally more blacks in Atlanta than in
14 Boston.

15 Q. Where did you go after Harvard?

16 A. I went to Minneapolis as chief of internal
17 medicine at what was the old Minneapolis General
18 Hospital, but had been renamed as the Hennipen
19 County Medical Center as chief of internal medicine.

20 Q. Doctor, why did you leave Harvard?

21 A. Well, my wife says I managed to shed my
22 golden handcuffs based on, I guess, must be a mid
23 50s wish to do something else.

24 Q. Okay.

25 A. So I did.

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1 Q. What did you do -- well, before you left
2 Harvard, had you done -- I think you indicated you
3 did research there, right?

4 A. Yes.

5 Q. On the topic of asthma and chronic
6 obstructive pulmonary disease?

7 A. And basic physiology, too.

8 Q. We're going to talk about your writing
9 here in just a little bit, but you were doing both
10 patient care, education of medical students, medical
11 residents and fellows, as well as running the
12 pulmonology department at various hospitals in
13 Boston?

14 A. Yes.

15 Q. Very, very active practice?

16 A. It was an active time, yes.

17 Q. You went to Minnesota. What was your
18 engagement in Minnesota?

19 A. I was vice-chair of the department of
20 internal medicine at the University of Minnesota.
21 And chief of medicine at this county hospital,
22 Hennepin County Medical Center.

23 Q. What's the difference between being the
24 head of the pulmonology section and now being head
25 of medicine?

1 A. Well, you go back to being responsible for
2 the disciplines, kidneys, hearts, blood, intestines,
3 the whole gamut of subspecialties comprise internal
4 medicine, as an umbrella specialty. So it was
5 generalizing again.

6 Q. Were you still taking care of patients?

7 A. I was.

8 Q. What's the sarcoidosis population in
9 Minnesota?

10 A. It's not much. And if you did see it, you
11 were more apt to see it in someone of Swedish
12 descent.

13 Q. What's the COPD, emphysema, chronic
14 bronchitis population?

15 A. That's substantial everywhere.

16 Q. Doctor, how long were you at Minnesota?

17 A. Just a little under three years.

18 Q. Why did you leave there?

19 A. I don't know if anybody has ever -- I
20 thought I was winter tough after living all the
21 years in the northeast, and I went to Minnesota, and
22 Minneapolis, which is a lovely city, but I've never
23 experienced winters like that. And I realized that
24 I was not as tough as I thought I was. So I was --
25 when I got an unsolicited offer to return to a

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1 climate that I knew about, I accepted it.

2 Q. Who gave you that offer to return to the
3 south?

4 A. It was the chairman of medicine at Emory,
5 Dr. Kokko.

6 Q. So you went back to Emory?

7 A. Went back to Emory.

8 Q. What was your position when you went back
9 to Emory?

10 A. I was chief of internal medicine at the
11 downtown hospital, which is Emory Crawford Long
12 Hospital. And I also accepted responsibility for
13 the pulmonary critical care division over the entire
14 Emory system.

15 Q. How many hospitals are involved in the
16 entire Emory system?

17 A. Five.

18 Q. So when you went back to Atlanta, you went
19 back to be in charge of pulmonary care for all the
20 patients in five hospitals?

21 A. Well, I was in charge of the faculty
22 there, and they in turn were in charge of the care.
23 Yes.

24 Q. Were you also a full professor at Emory
25 medical school?

1 A. Yes, I was.

2 Q. And were you again endowed with a chair?

3 A. I was.

4 Q. What was the name of that chair?

5 A. Martha West Looney, L-o-o-n-e-y.

6 Q. And were you back again frequently
7 treating patients with sarcoidosis?

8 A. Yes, I was.

9 Q. Can you give this jury -- you weren't
10 keeping a tally, you didn't know you were going to
11 be asked to come testify in this case, did you?

12 A. No.

13 Q. So you weren't keeping a tally of all the
14 sarcoidosis patients you've treated in your career,
15 have you?

16 A. No.

17 Q. Give the jury some sense of how many
18 sarcoidosis patients you've treated over the last 40
19 years?

20 A. Forty years.

21 Q. Sorry I said it that way.

22 A. No, that's the truth. It's 40 years, it's
23 awfully astonishing to hear it, but an awful lot.
24 But I didn't count, I'm sorry. Must be in the
25 hundreds.

1 Q. More than 500?

2 A. Probably a little more than.

3 Q. And --

4 A. But I'm not sure.

5 Q. I understand.

6 Doctor, did you also treat a significant
7 number of patients suffering emphysema, chronic
8 bronchitis and chronic obstructive pulmonary
9 disease?

10 A. I did.

11 Q. Doctor, while you were at Emory, and
12 teaching in the medical school, did you receive any
13 awards?

14 A. You mean the first or second incarnation?

15 Q. I'm sorry, both.

16 A. Well, I was fortunate to get, from the
17 medical students in the class in the late '60s,
18 early '70s, the Best Clinical Professor Teaching
19 Award. And I've been very fortunate to receive from
20 the house staff, the residents, a couple of Golden
21 Apple Awards for teaching. And those have been very
22 nice.

23 Q. What is the Golden Apple Award?

24 A. Means the people you taught thought you
25 were effective in teaching them. So it's sort of a

1 pat on the head.

2 Q. All right. Doctor, did you retire from
3 Emory?

4 A. I did.

5 Q. When did you retire?

6 A. January 1, 2000.

7 Q. What does retirement mean to you? What
8 did that mean?

9 A. Well, I'm still very active. I ran a
10 couple of clinics, one pulmonary and one medical
11 clinic at Grady Hospital for a good part of 2000. I
12 took care of a house staff team that admitted
13 patients to the hospital and took care of them while
14 they were there.

15 I had a weekly conference at the Emory
16 Crawford Long Hospital with the residents, case
17 conference. I have a one-on-one tutorial in
18 pulmonary physiology with the pulmonary fellows.
19 And so that takes about six months out of the year,
20 every day.

21 Q. Doctor, do you continue to charge for your
22 medical services?

23 A. No. No.

24 Q. But you continue to practice pulmonary
25 medicine right on through today?

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1 A. In teaching other people how to do it,
2 yes. Seeing patients and reviewing cases and so
3 forth, yes.

4 Q. Are you sure you're retired, Doctor?

5 A. Yes, I am. It's far less of a pace than
6 it was before.

7 Q. What's your status at Emory now?

8 A. I'm professor emeritus.

9 Q. Doctor, let's talk about your
10 publications. Throughout your medical career,
11 you've done medical research, is that correct?

12 A. I have.

13 Q. And can you give the jury -- I have your
14 curriculum vitae. I'm not going to go through it in
15 any great detail, but is it fair to say that you've
16 published over 150 articles in peer-reviewed medical
17 journals?

18 A. That is correct. Yes.

19 Q. Have you written chapters in medical
20 texts?

21 A. Yes. Yes, I have.

22 Q. Can you tell me if you are either the
23 author or co-author of several chapters in
24 Harrison's?

25 A. Yes.

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1 Q. Is this the leading text on internal
2 medicine in the United States and, for that matter,
3 the world?

4 A. I'm told, for the 14th Edition -- I think
5 that's the 15th you've got there -- the sales were
6 the largest worldwide for Harrison's.

7 Q. Doctor, can you tell this jury what
8 chapters you either write or co-author in this text?

9 A. Yes, it's entitled Chronic Bronchitis,
10 Emphysema and Chronic Airways Obstruction. And
11 that's a title that, or chapter that I've written
12 for -- since 1977.

13 The other was the Acute Respiratory
14 Distress Syndrome. And the other is Dyspnea, that
15 is shortness of breath, and Pulmonary Edema, meaning
16 excess liquid in the lung.

17 Q. Doctor, have your writings included the
18 topic of sarcoidosis?

19 A. They have, in the Scientific American
20 Medicine textbook.

21 Q. That's a completely different textbook,
22 right?

23 A. It is.

24 Q. Have your writings included the topic of
25 emphysema?

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1 A. They have.

2 Q. Chronic obstructive pulmonary disease?

3 A. Yes.

4 Q. Chronic bronchitis?

5 A. Yes.

6 Q. Cigarette smoking?

7 A. Yes.

8 Q. Environmental tobacco smoke?

9 A. To some extent in the epidemiologic
10 portion.

11 Q. Can you give this jury a sense of the
12 scientific medical journals in which your research
13 has been published?

14 A. Well, the journal you choose many times
15 depends on the audience that you want to reach.

16 And if it's a basic topic, you would like
17 for it to go to a basic journal. So the Basic
18 Science Journal.

19 If it's a topic that would interest
20 somebody who is taking care of patients, you'd want
21 to go to a journal that that person is more apt to
22 read, such as the New England Journal of Medicine or
23 The Annals of Internal Medicine. Those would be
24 clinically focused articles, or the American Journal
25 of Respiratory and Critical Care Medicine, formerly

1 called the American Review of Respiratory Diseases.

2 Those would be the journals where you
3 would like to reach practicing doctors. The others,
4 like the Journal of Applied Physiology, the Journal
5 of Clinical Investigation, where you want to reach a
6 more basic science-oriented group of people.

7 Q. Doctor, can you tell me if you've had
8 articles published in the New England Journal of
9 Medicine?

10 A. Yes.

11 Q. Is that certainly among the most
12 prestigious medical scientific publications in the
13 world?

14 A. It certainly is a fine journal and it's
15 widely recognized, yes.

16 Q. Can you tell this jury how many times
17 you've had articles published in the New England
18 Journal of Medicine?

19 A. I don't know, I think it's around seven,
20 but I'm not sure.

21 Q. Have you also had articles published in
22 the American Journal of Medicine?

23 A. I have.

24 Q. That's another extremely prestigious
25 medical journal, isn't it?

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1 A. It's a reasonably good journal, yes.

2 Q. Doctor, have you had other roles with
3 medical scientific publications besides simply
4 having your articles published in them?

5 A. Yes. I've been a reviewer for many
6 journals.

7 Q. Could you explain to the jury what being a
8 reviewer means?

9 A. What an editor or associate editor of a
10 journal does, he gets a paper that someone has sent
11 to the journal to be evaluated for being published.
12 And the peer-review system is the editor or
13 associate editor identifies someone as known to be
14 knowledgeable in the field of that paper, and then
15 sends the paper to that person for evaluation.

16 Were the right measurements made? Do the
17 statistics work? Do they make sense? Is the
18 interpretation in keeping with the actual objective
19 observations that were made?

20 It's an evaluation to see if that's good
21 science. And that's what peer reviewing is about.

22 Q. Have you been a peer reviewer for the New
23 England Journal of Medicine?

24 A. I have.

25 Q. Can you give the jury -- I realize the

1 list is lengthy, but just give them a couple of
2 other journals that you have been a peer reviewer
3 for?

4 A. The American Journal of Medicine, Annals
5 of Internal Medicine, the American Journal of
6 Respiratory and Critical Care Medicine. The Journal
7 of Applied Physiology.

8 Q. Doctor, what does it mean to be a member
9 of the editorial board of a scientific journal?

10 A. Well, that means that you're recognized to
11 be someone knowledgeable in that field, who has been
12 fair in reviewing your peers' work.

13 Q. Is that a greater responsibility than
14 being a reviewer?

15 A. It is.

16 Q. Could you describe briefly how that's
17 different?

18 A. An associate editor actually is at the
19 point of trying to make the decision of whether to
20 publish this paper or not. That is to say, you
21 might have three reviewers, and two thought it was a
22 wonderful paper and one thought it was just
23 horrible. Well, you've got to sit down and evaluate
24 what the truth of the matter is and then make a
25 decision.

1 So it is more of a responsibility. And
2 then if you get reviewers who like the paper, but
3 you look at it and say, I don't think this is going
4 to be that interesting to our readership, then you
5 still might not publish it, because it just wasn't
6 interesting enough, in your assessment, to keep the
7 readership coming back to your journal.

8 Q. Okay. Doctor, have you held any positions
9 with any national organizations relating to the
10 lung?

11 A. I have.

12 Q. For example, have you been the president
13 of the American Thoracic Society?

14 A. Yes, I have.

15 Q. Doctor, I just want to -- I think we've
16 discussed your credentials extensively, I'd like to
17 ask you one other question. Are there any other
18 awards that you've received that we haven't talked
19 about?

20 A. From the American Lung Association, I was
21 very pleased to receive the Trudeau Medal.

22 Q. What is the significance of the Trudeau
23 Medal?

24 A. Well, my wife calls it the cap on the
25 gravestone of a career, recognizing your

1 contributions of teaching, research over a career,
2 awarded by the American Lung Association and the
3 American Thoracic Society.

4 Q. Doctor, how did you become involved in
5 this case? Do you recall?

6 A. Yes, I do. A colleague of mine, Bill
7 Whaley, in Atlanta, who had served as medical
8 officer for Delta Airlines, was contacted by an
9 attorney called Barry, named Barry Richardson, I
10 believe, to whom he gave my name, subsequently
11 sought my permission to do so, and I was fine with
12 that, having to do with an issue of litigation
13 concerning environmental tobacco smoke.

14 Q. All right, Doctor, is this something you
15 do frequently?

16 A. No.

17 Q. Can you tell the jury how many times in
18 the past you've ever been involved in medical/legal
19 issues?

20 A. Actually appeared on a witness stand?

21 Q. Appeared on a witness stand, given a
22 deposition?

23 A. Well, this is my third witness stand
24 appearance. The first was a malpractice case back
25 in the mid '70s in Boston, the other one was

1 malpractice case last year in Dekalb County, which
2 is one county in Metro Atlanta.

3 Q. Do you charge for your time?

4 A. I do.

5 Q. What's your rate?

6 A. \$300 per hour.

7 Q. Is that to review records?

8 A. It is.

9 Q. Do you charge something else for coming to
10 the courthouse and testifying here?

11 A. Yes, \$450.

12 Q. Doctor, before I get into your opinions
13 and what you've done, would you agree that any
14 opinions you express here today will be based on a
15 reasonable degree of medical probability?

16 A. Yes.

17 Q. And that they'll be founded on your
18 training, your experience as a physician that you've
19 gained over the years?

20 A. Yes.

21 Q. All right. Doctor, can you tell us what
22 you've reviewed in connection with Ms. Fontana's
23 case?

24 A. In connection with this particular case,
25 I've reviewed all of the medical records, both

1 office and hospital records, from 1989 to the
2 present.

3 I have reviewed all of the chest X-rays
4 from 1989 to the present.

5 I've looked at all of the reports for
6 those chest X-rays, all the lung function tests that
7 were performed over that period of time, and the
8 reports of the results of those lung function tests.

9 Q. Doctor, do you recall the names of the
10 pulmonologists whose records you reviewed?

11 A. Well, the ones clearest in my mind were
12 Greene, Dr. Greene and Dr. Coopersmith. There was a
13 brief entry in early '89 by a fellow named, I think,
14 Adelman.

15 Q. So you saw records from pulmonologists by
16 the name of Adelman, Greene and Coopersmith?

17 A. Yes.

18 Q. I don't expect you to remember the names
19 of all the health care providers, but with the
20 exception of the name of Mr. Hunter's law firm, are
21 these the list of all the health care providers
22 whose records you reviewed in this case?

23 A. That looks right. But there are 32
24 entries there, and most of them look familiar. So
25 it looks right to me.

1 Q. And, Doctor, I have a list of the
2 radiologists who reviewed and wrote reports of the
3 interpretations they made of the radiology chest
4 X-rays and CT scans of Ms. Fontana. Does that look
5 like the list of folks whose reports you reviewed?

6 A. It does, I didn't commit them all to
7 memory, but that certainly looks that way.

8 Q. Now, Doctor, did you do any other review,
9 literature review, in connection with your work in
10 this case?

11 A. Yes.

12 Q. And could you tell the jury what kind of
13 literature review you did?

14 A. Well, the literature that I wanted to
15 review for this case was whether or not there was a
16 connection between sarcoidosis and smoking of any
17 variety, whether it's mainstream or environmental.

18 So I really did a search on the world
19 literature available on that topic.

20 Q. Did we also provide you with a copy of the
21 deposition of Ms. Fontana?

22 A. You did.

23 Q. Now, Doctor, let's get right to the point.
24 Based on your review of all these medical records,
25 the radiology, the X-rays, the CT scans, the

1 pulmonary function tests, do you have an opinion as
2 to what, if any, lung disease Ms. Fontana suffers
3 from?

4 A. I do.

5 Q. And what is that?

6 A. Sarcoidosis.

7 Q. Do you have an opinion as to whether
8 Ms. Fontana suffers from emphysema?

9 A. I have an opinion.

10 Q. And what is your opinion?

11 A. She does not.

12 Q. Do you have an opinion as to whether or
13 not she suffers from chronic obstructive pulmonary
14 disease, COPD?

15 A. Yes.

16 Q. And what's your opinion?

17 A. She does not.

18 Q. Do you have an opinion as to whether or
19 not she suffers from chronic bronchitis?

20 A. Yes.

21 Q. And what's your opinion?

22 A. Her record indicates she does not.

23 Q. Do you have an opinion as to whether or
24 not there's evidence of peribronchial thickening on
25 any of her chest X-rays or CT scans?

1 A. Yes. I didn't see it.

2 Q. Doctor, can you tell this jury
3 approximately when Ms. Fontana was first diagnosed
4 with sarcoidosis?

5 A. The first note I saw from Dr. Greene, in
6 1989, indicated that at the time of her gall bladder
7 surgery in New York, in either '79 or '80, she had
8 the changes that were typical of sarcoidosis on the
9 routine chest X-ray that was probably done prior to
10 having the gall bladder removed.

11 So I would say it could be -- if that is
12 documented, it could be documented back to '79 or
13 '80.

14 Q. How did it progress over the years?

15 A. Well, it went from Stage I, just from the
16 swollen lymph glands in the chest, right near the
17 eye of the lung, to involve the lung tissue itself.
18 And then resulted in scarring and retraction of a
19 scar and cavitation and cysts to an end stage state
20 where she is now requiring constant oxygen.

21 Q. You mentioned cavitation and cysts; would
22 you tell the jury what those are?

23 A. Yes. I don't know what you've been shown
24 but there are --

25 Q. You know what? I'll let you hold on to

1 that for a moment because I think we have a
2 depiction of that.

3 Doctor, does anybody know what causes
4 sarcoidosis?

5 A. No.

6 Q. Does anybody know what causes it to
7 progress in folks?

8 A. No.

9 Q. Does anybody know what caused
10 Ms. Fontana's sarcoidosis?

11 A. No.

12 Q. Does anybody know what caused it to
13 progress?

14 A. No.

15 Q. Is there a cure for sarcoidosis?

16 A. None.

17 Q. Did Ms. Fontana's exposure to
18 environmental tobacco smoke have anything to do with
19 her sarcoidosis?

20 A. No.

21 Q. Doctor, this jury has heard some things
22 about sarcoidosis, but they really haven't, I don't
23 think anyway, that they've gained the history of the
24 disease.

25 Can you explain to them briefly when

1 sarcoidosis was first identified by people of
2 medicine?

3 A. Yes. The records go back to the mid 19th
4 Century.

5 Q. 1800s?

6 A. 1800s. And it was first described as a
7 skin disease, because sarcoid can involve the skin.
8 You realize, in the mid 19th Century there were no
9 X-rays, so you didn't have a way to look into the
10 body. So a good part of what you learned was
11 probably sitting on the outside of the body, and
12 that was initially a skin disease.

13 And they named it sarcoid, "sarc" meaning
14 flesh and "oid" meaning like. Fleshlike. So this
15 was a skin disease.

16 But with the advent of X-rays in the very
17 late 19th and early 20th Centuries, you started to
18 get a better window on the body with the use of
19 X-rays. And people began to notice sometimes with
20 this skin disease there were these large nodes in
21 the chest, so you learn more and more as time went
22 on, because every tissue in the body can be affected
23 by these lesions.

24 Q. I was just going to ask you, is it a
25 systemic disease?

1 A. It is.

2 Q. What does that mean?

3 A. That means it can involve other parts of
4 the body. It can involve the eyes, and we mentioned
5 the skin already. The lungs you know about. The
6 liver, the kidneys. It can alter the metabolism of
7 calcium in the body and lead to kidney stones,
8 formation of kidney stones. So that's not due to
9 the lesion itself; it's due to some of its metabolic
10 activity.

11 Q. Did Ms. Fontana suffer from sarcoidosis in
12 other parts of her body besides her lung?

13 A. The record indicates she had an eye
14 involvement, so-called and she had had kidney stones
15 back in the early '90s.

16 Q. Doctor, this is called a granulomatous
17 disease, right?

18 A. Yes.

19 Q. What does that mean?

20 A. Well, I guess everybody knows what a
21 granule is, a little something. And an "oma" means
22 swelling. So it's a little bitty swelling in the
23 body. But that doesn't tell you very much. And it
24 represents one of the ways that the body defends
25 itself against invaders from outside.

1 Q. Doctor, if you wouldn't mind, I was going
2 to ask you if you would step down. And if you
3 could, do just a brief description of how this works
4 in the body, what it looks like.

5 A. Okay. You've probably seen several
6 X-rays. And the lungs are here. And you had these
7 big lymph glands, so-called hilar adenopathy. If
8 you could get a piece of that lymph node and bring
9 it out and put it under a microscope, what you would
10 see in it is teaming with cells that are around the
11 edge, sometimes a big cell in the center, and these
12 cells are really doing their best to defend the body
13 against whatever invader is in there.

14 Now, if that invader is a germ like TB,
15 that's good, because that helps corral it and allows
16 you to kill it. Of course, sometimes the germ wins,
17 breaks out and goes into other parts of the body.

18 If that germ is something like a fungus,
19 that's good, because it keeps the germs away, like a
20 wagon surrounding this germ, and keeps it from
21 invading the cells of your body.

22 If you don't know what the invader is and
23 it doesn't do any harm, like grow and go to other
24 parts of your body, that would otherwise kill you,
25 then your body, in a sense, is responding not in an

1 appropriate way. And it becomes, in a sense, an
2 immune response, that is, your defense system
3 responding in a way that ultimately does you in, or
4 is not to your advantage.

5 And when you get these granulomas, two
6 things can happen. One is that they just disappear,
7 the immune system wises up and says, this is not bad
8 after all. And they just disappear. And that's
9 true of 80 to 85 percent of all people who present
10 with Stage I sarcoid, which was apparently the case
11 in '79 or '80.

12 Q. For Ms. Fontana?

13 A. Right.

14 And she was one of the unlucky 15 to 20
15 percent where these things go -- these cells now
16 have also the ability to form scar tissue. So
17 rather than disappearing, now they start forming
18 scar tissue, and the granulomas now turn and start
19 making scar tissue, lots of scar tissue. And what
20 makes that happen, I don't know.

21 Q. Does anybody know?

22 A. No. No, I don't think anybody knows.

23 Q. Does anybody know for sarcoidosis what
24 that invader is?

25 A. No. And over the years, the things that

1 have been considered possible, pine pollen.

2 Q. What is pine pollen?

3 A. Pine pollen was the Eastern White Pine.

4 Q. You need to talk to them, because I don't
5 count. And they agree with that.

6 A. Sorry about that.

7 Pine pollen -- of course, this time of
8 year you could get pine pollen up in the mountains
9 or even in the valleys. And the idea was that this
10 might have something in it that would act like an
11 invader that the body might respond to. But it
12 turns out that an extract of this pollen does
13 produce some lesions like this.

14 But it didn't work out. First it was an
15 epidemiological clue, because there were certain
16 regions of Sweden and certain regions of the
17 Southeast that both had a similar pine tree. And
18 they had a lot of sarcoid. Of course, in the
19 Southeast, there were lots of American blacks, and
20 in Sweden there were lots of Swedes, and these are
21 the two populations that have a lot of sarcoidosis.
22 So it really didn't pan out.

23 Then people started thinking about talc.
24 Well, there's not much talc around, underarm spray
25 deodorants. And Zircon, Zirconian compounds, people

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1 have been just looking for years.

2 Unusual --

3 MR. HUNTER: Doctor, excuse me.

4 Judge, I object to this. The doctor has
5 testified they don't know what causes this
6 disease. And to just have him go on and on
7 about pine pollen isn't irrelevant.

8 MR. REILLY: Your Honor, I think it gives
9 the jury a sense of exactly what the state of
10 the science is about this disease.

11 I didn't plan on extending this very long,
12 but I think it's fair to give them a sense of
13 what the --

14 THE COURT: Let's try to --

15 MR. REILLY: -- compress it, no problem.

16 THE WITNESS: I can stop at any moment.

17 MR. REILLY: I think, based on counsel's
18 objection, we'll bring it to a close.

19 THE WITNESS: Fine.

20 BY MR. REILLY:

21 Q. Doctor, I think you indicated that some 15
22 to 20 percent of the time the disease progresses,
23 instead of resolving, it progresses to laying down
24 scar tissue; is that correct?

25 A. That's correct.

1 Q. How does the body do that? How does it
2 lay down scar tissue?

3 A. Well, some of these cells can turn into
4 so-called fibroblast, meaning fiber-makers. And
5 those are the very cells that produce scars after
6 you've cut your self and how you heal as a result of
7 fibroblast making scar tissue.

8 Q. Doctor, if we were to pull up an image of
9 the lung, if we could do that, can you tell the jury
10 where sarcoidosis in the lung most frequently
11 develops? And I think -- do you have a laser
12 pointer?

13 A. I think so.

14 Well, here the so-called hilus of the
15 lung, which is the eye of the lung where airways
16 enter the lung and where blood vessels enter and
17 leave the lung. There are some local sentinels
18 here. Lymph nodes are glands that get large.

19 Q. When you say "lymph nodes," I honestly
20 forget, have you explained to the jury what that is?
21 If you haven't, would you, please?

22 A. Yes. I would. If you've ever had
23 anything wrong with your scalp, sometimes you might
24 reach back and feel that some of the nodes back
25 here, the little lymph glands have enlarged because

1 they are sort of a second line of defense for when
2 the body has been invaded.

3 And if you had something on your arm, you
4 might find that in your armpit, the lymph glands
5 have gotten enlarged and tender. So they're local
6 sentinels. So that indicates that something has
7 come in and these immune guardians have responded.

8 But the presumption is, and it is a
9 presumption, that something has come in out here and
10 gets transported to these lymph nodes here at the
11 eye of the lung.

12 Q. Something has come in from outside?

13 A. Yes.

14 Q. From the exterior of the lung?

15 A. Some antigen.

16 Q. Antigen, that's that invader you were
17 talking about?

18 A. Yes.

19 Q. And it is drained to the lymph nodes?

20 A. Through the lymphatic system, yes.

21 Q. And is there any particular -- so it's in
22 the center of the lung where it ordinarily begins?

23 A. Well, that's where you ordinarily see it.
24 The presumption is something happens out here first.

25 Q. Then where does this -- do we have a

1 depiction of the outer limits of the lung? Can we
2 put them both up at the same time?

3 Doctor, can you describe for the jury what
4 is on our second shot?

5 A. Well, if you follow one of these branches
6 way out to where you don't see very much, this
7 basically continues it, way out here.

8 Q. Would you make a mark there, please?

9 A. So this is a respiratory bronchiole,
10 meaning little airway, it goes out to an alveoli
11 sac. Here you have a bunch of alveoli, so it's
12 supported by an elastic meshwork, supported by the
13 tissue of the lung.

14 MR. REILLY: Can we enlarge this, please?

15 Q. Doctor, what are the alveoli in this
16 picture?

17 A. Each of these balls that you see is an
18 alveolus.

19 Q. What is the artist's rendering of the blue
20 lines?

21 A. Well, that would be the framework of the
22 lung, the tissue framework of the lung. It's
23 architectural girding, if you will.

24 Q. When this scarring occurs, where does it
25 occur?

1 A. The scarring, once you have an involvement
2 of the lung with these granulomous lesions that have
3 now started making a lot of scar tissue, you really
4 obliterate, you completely destroy the architecture
5 of the lung.

6 Q. How does it change?

7 A. It can turn into cysts, bullae, holes and
8 dense scar tissue and fibrous bands.

9 Q. Does it change the size of the lung?

10 A. It makes the lung smaller.

11 Q. How does it do that?

12 A. Well, scars, after they form, tend to
13 contract. If somebody has an old surgical scar and
14 has gained a little weight, you can see the effect
15 of retracting scar, it gets smaller.

16 Q. Doctor, what happens way out here where
17 the alveoli are? What's the function that goes on
18 there?

19 A. It takes up oxygen from the atmosphere and
20 gets rid of carbon dioxide, which is what your body
21 makes as it uses up food requires oxygen and gives
22 off carbon dioxide.

23 Q. Is that called the gas exchange?

24 A. It is.

25 Q. Are there red blood cells moving by in the

1 area of those alveoli?

2 A. They are.

3 Q. Can you draw that for this jury?

4 A. Sure.

5 Q. And then if you haven't guessed it
6 already, what I'd like you to do is explain to this
7 jury what happens to somebody's lung function, this
8 gas exchange, when they develop sarcoidosis?

9 A. This is highly schematic. This is a gas
10 sac, one of those little balls with blue things on
11 it.

12 Running by is a capillary, a very small
13 blood vessel. And during this passage, it takes up
14 oxygen that goes into the blood and gives up carbon
15 dioxide that goes into the alveolus. If you say,
16 how fast does that happen? Well, in us, if we go
17 from a low O₂ or a high O₂, this is if it's done its
18 job, it does it very quickly.

19 Now, if you have trouble getting gas
20 across this, it may take longer, but eventually it
21 will take place because you have about
22 three-quarters of a second. However, if you
23 exercise, it cuts down on the time that the blood
24 spends in this vessel, and you drop your oxygen, and
25 it's a so-called desaturation of oxygen with

1 exercise, which is I think what Ms. Fontana had
2 early on.

3 Q. How does that make you feel?

4 A. Makes you feel short of breath and
5 uncomfortable. So oxygen helps a lot.

6 Q. All right. Doctor, if we -- you mentioned
7 holes that appear in the lung. Where do those holes
8 from sarcoidosis ordinarily appear?

9 A. They ordinarily appear at the top of the
10 lungs.

11 Q. Why is that?

12 A. I always like to use the analogy of a
13 Slinky.

14 Q. Well, I just happen to have one. I
15 anticipated that.

16 A. Well, all right.

17 Q. This is very high tech.

18 A. I think it does illustrate. Because the
19 lung is up, we're upright creatures, most often.

20 And the lung is suspended in a gravity
21 field. And if you say that the lower part of the
22 lung doesn't have much tension in it, the upper part
23 of the lung has a lot of tension. And if I do some
24 damage, equivalent damage to this ring as to the --
25 and do the same amount of damage in one of these

1 lower rings, this one is going to be more apt to
2 break, because it's really supporting the weight of
3 the whole system. This one down here, which is not
4 under much strain at all, wouldn't be affected.

5 That's why holes tend to form at the top
6 of the lung, because we're upright creatures and the
7 gravity effect on the lung.

8 Q. Is it actually tearing the fabric of the
9 lung?

10 A. It is.

11 Q. And that's what creates the holes?

12 A. Well, it's actually, when you say
13 "tearing," if you take something and put it under a
14 stress for a long period of time, it's more like
15 having it gradually extend itself rather than an
16 explosive tear.

17 Q. Just sort of separates over time?

18 A. Separates over time.

19 Q. Doctor, I think we have a depiction of it.

20 Now, is this a picture of the lung of
21 somebody that has sarcoidosis with cavitation, I
22 think you said, holes in the lung?

23 A. It is.

24 Q. And I'm going to ask Pete if he will
25 follow what you say and mark on this drawing.

1 A. The first thing to note is --

2 Q. First of all, do you recognize who did
3 this artistic rendering?

4 A. Frank Netter.

5 Q. Have you published with Frank Netter?

6 A. I have, he was a wonderful man.

7 Q. Let me back up a little bit. Go back to
8 the larger image.

9 This is a right lung. This is a right
10 lung, and that's the top of it, the so-called apex.

11 To orient the jury, this is the top of the
12 lung, the bottom of the lung, and right there is
13 the --

14 A. The airway, bronchus.

15 Q. Coming in?

16 A. Yes. The first thing to notice is these
17 white things right here.

18 Q. What is that?

19 A. That's scar tissue.

20 Q. That shouldn't be there?

21 A. Shouldn't be there. As this scar tissue
22 gets smaller, it pulls open some of these holes,
23 these cavities. Some are small, some are relatively
24 large, but they all have thick walls.

25 Q. Let me stop you right there. Could you

1 please just circle one of those?

2 A. Here is a good example of a thick wall
3 right there. Here's a good example of a thick wall
4 right there.

5 Q. When you say "thick wall," what's the
6 significance of a thick wall?

7 A. That means it's been an inflammatory
8 process associated with scar tissue.

9 Q. Does emphysema create -- emphysema that
10 smokers get, does it look like that?

11 A. No, as a matter of fact, the American
12 Thoracic Society definition specifically excludes
13 this by saying, without evidence of fibrosis.

14 Q. So it isn't just you saying it?

15 A. Oh, no.

16 And by the way, here is a fungus ball.

17 Q. Can we circle that fungus ball in a
18 different color, please?

19 A. You see that it's got a little extra room
20 there.

21 Q. How does that -- so these holes are
22 brought about because of the scarring over time?

23 A. They are.

24 Q. And then how does the fungus ball occur?

25 A. Well, it's clearly an interloper. The

1 fungus grows, that grows in these, is very akin to
2 bread mold. And we all know that bread mold is
3 pretty -- there's a lot of it around. So it's a
4 fungus that we all have at one time encountered in
5 our bodies, maybe right now.

6 But because of the altered structure, this
7 fungus ball is sort of like a hermit crab, it
8 occupies somebody else's shell. This is a hermit
9 crab fungus ball. And it grows in there because
10 there's not much defense going on. You've got scar
11 tissue in the walls, you've got not much fresh air
12 coming in.

13 Q. Does the treatment that people undergo
14 because of their sarcoidosis have an impact on the
15 presence of fungus balls?

16 A. It does, because the treatment for sarcoid
17 is to suppress the immune system. Remember, we
18 talked earlier about this is an immune system that
19 has turned against an unknown enemy that would not
20 otherwise have done any harm as far as we can tell.

21 So this calms down the immune system.
22 Once you do that, all sorts of strange things can
23 grow. And this is one of them.

24 Q. Any way to avoid that?

25 A. Not really.

1 Q. That treatment, does it cure sarcoidosis?

2 A. No, it does not.

3 Q. That's another thing that science doesn't
4 know about, does it?

5 A. Correct.

6 Q. Well, Doctor, let's talk about who
7 diagnoses and treats patients with sarcoidosis.
8 What medical specialty does that most often?

9 A. You mean brings all these things together?

10 Q. Yes.

11 A. Quite often it can be suspected by any
12 number of people. But they almost always get
13 referred to a pulmonologist.

14 Q. Let's talk about that process a little
15 bit.

16 You can see we've created this chart that
17 shows the pulmonologist at the middle of it,
18 correct?

19 A. Correct.

20 Q. Can you tell me what resources, for
21 example, what use of the pathology department does
22 the pulmonologist make in rendering a diagnosis of
23 sarcoidosis?

24 A. Well, quite often the pulmonologist gets
25 the small piece of tissue that the pathologist looks

1 at under the microscope. And the pathologist says,
2 this is a granuloma that is not apparently caused by
3 TB or a fungus or beryllium. So it's a granuloma of
4 unknown cause that is compatible with sarcoid.

5 So the pathologist could rule in something
6 else, but cannot rule out sarcoid.

7 Q. All right. We haven't really talked
8 about the clinical history and exam. How does that
9 work?

10 A. Well, if you take the case in point here,
11 the clinical history and exam was, I guess,
12 negative. We don't have the primary records in New
13 York in '79 or '80. But the radiograph was
14 abnormal. And that led to a suspicion of sarcoid.

15 The normal route would be for the
16 radiologist to send this back as perhaps lymphatic
17 cancer, perhaps sarcoidosis, perhaps tuberculosis,
18 and it's up to the pulmonologist to find out what it
19 is.

20 Q. If they see bumps on the eye clinically,
21 in other words, in the clinic?

22 A. Yes.

23 Q. Does that help make the diagnosis?

24 A. It does, uveitis does. Sometimes a
25 pulmonologist gets a referral from an

1 ophthalmologist, eye doctor.

2 Q. You talked about kidney stones. If they
3 have bumps on the eye and kidney stones, does that
4 help make the diagnosis?

5 A. It does.

6 Q. We've talked extensively in this courtroom
7 about radiology, so what the radiologist interprets
8 is of assistance as well?

9 A. Yes.

10 Q. How about the pulmonary function tests,
11 and as part of that the flow volume curves, they
12 haven't even heard about flow volume curves yet.
13 Are those things that help the pulmonologist decide
14 what condition the patient has, in other words,
15 whether he or she has sarcoidosis?

16 A. They help characterize the functional
17 abnormality, but they don't speak to causation.

18 Q. They don't tell you what's causing it?

19 A. It gives you a pattern. Basically you
20 have two patterns, obstructive and restrictive. And
21 then sometimes combinations of the two.

22 Q. This jury has heard about restrictive lung
23 disease and obstructive lung disease, and we'll talk
24 about that more in just a little. But in this case,
25 you mentioned, at the outset of your testimony, that

1 there are three pulmonologists who have treated
2 Ms. Fontana: Dr. Adelman, Coopersmith and Greene?

3 A. Yes.

4 Q. You've reviewed their records?

5 A. I have.

6 Q. Did they all come to a diagnosis as to
7 what medical condition she had in her lungs?

8 A. They did.

9 Q. What was that?

10 A. Sarcoidosis.

11 Q. Is that the same as your diagnosis of
12 sarcoidosis?

13 A. It is.

14 Q. Did any of them come to the conclusion
15 that she had any other lung disease in her lungs?

16 A. No. They did not.

17 Q. Nor did you?

18 A. No. Nor did I.

19 Q. Doctor, let's talk about restrictive lung
20 disease. Can you tell us what that means?

21 A. Yes. We were talking earlier about this
22 scarring process and scars retracting. That means
23 the lungs get smaller and stiffer as a result of
24 this inflammation and scarring. Air gets out of
25 them pretty fast, easily, but they can't hold much

1 air. So that's restricted. It's restricted in this
2 expansion.

3 Q. What's the difference between that and an
4 obstructive lung disease?

5 A. Obstructive lung disease means you have a
6 lot of trouble getting the air in and out. It's --
7 it takes a lot of pressure, takes a lot of time.

8 Q. And can you make that determination of
9 whether you have a restrictive or an obstructive
10 lung disease based on an X-ray?

11 A. No.

12 Q. What does that require in order to make
13 that determination?

14 A. It requires a functional test.

15 Q. And what do they call that functional
16 test?

17 A. Well, pulmonary obstructive functional
18 test of which a flow volume curve is part.

19 Doctor, I have an example of a flow volume
20 curve here. Correct?

21 A. Uh-huh.

22 Q. Can you explain to this jury what a flow
23 volume curve is?

24 A. Yes.

25 Q. If you'd like to use a marker, please feel

1 free.

2 A. Fine.

3 The trip taken here is from the amount of
4 gas in your lung, air in your lung at the very top,
5 the biggest breath you can take. And then you're
6 asked to blow out as hard and as fast as possible.

7 Then you'll get down to the point where
8 you can get no other air out. And that's what's
9 residual in there, so-called residual.

10 So in a sense, this is the odometer, and
11 this is the instantaneous speedometer for this trip
12 from the top to the bottom. And a normal -- I'm
13 going to have to do this because we don't have time
14 here -- we just have flow. So a normal would do
15 like that and get the whole thing done in about
16 three to four to five seconds.

17 Q. Doctor, I'm going to slow you down just a
18 little bit, because I had a very difficult time with
19 this concept. That bottom line, what does that
20 represent?

21 A. That's the volume. That's the amount in
22 your lungs at the top. And as it decreases, going
23 down to where you cannot blow out anymore.

24 Q. Those numbers at the bottom, what do they
25 represent?

1 A. They're -- they represent liters, volume
2 of gas.

3 Q. Liters of air?

4 A. Liters of air.

5 Q. Is that how much air your lungs hold when
6 you take as deep a breath as you can take?

7 A. Correct. So-called total lung capacity.
8 That's as much as you can get in.

9 Q. Why do we have on this example six or six
10 and a half?

11 A. Well, that means that you have used
12 another technique to measure the amount of volume in
13 the lungs.

14 Q. So you've established how much --

15 A. You've established what the total lung
16 capacity is by another technique.

17 Q. So all we're really looking at with this
18 graph is how long -- we know already how much you --

19 A. Well, this is the trip and this gives you
20 the speedometer, if I look at this, if I say
21 (noise), that's how long the trip took.

22 Q. Now, I've got this whole thing a little
23 lopsided. I hope people don't mind.

24 On the right side --

25 Can everybody see that?

1 On the right side, we've got three
2 different ones, don't we?

3 A. We do.

4 Q. One says "Obstructive", one says "Normal"
5 and one says "Restrictive," right?

6 A. It does.

7 Q. And can you explain that to the jury?

8 A. Well, this is now the same as that. It's
9 just been put in diagram form.

10 Q. Let me stop you right there and ask you
11 why we moved the chart so that it now has on the
12 volume side all the way out to 9, almost, perhaps?

13 A. Well, because the lung volume increases in
14 obstructive lung disease.

15 Q. So a normal person will be able to inhale
16 6.5 or 7 liters?

17 A. As an example here, yes.

18 Q. But a person with emphysema or chronic
19 bronchitis --

20 A. -- would have a higher lung capacity.

21 Q. Okay. So that's why we start farther to
22 the left?

23 A. That is correct.

24 Q. And then how does a person with
25 obstructive lung disease, how do they --

1 A. Remember, we've got a shorter distance,
2 and there's a whole lot of gas left in that lung
3 after they pushed out as much as they could. So
4 they have an increased residual volume. Go to the
5 top and then blow out (noise). Takes a long time.

6 Q. Just drove the court reporter crazy. She
7 has no idea how to write that down.

8 It's a challenging job they have.

9 So when the person with the obstructive
10 lung disease is all through blowing out, they still
11 have four liters of air in them?

12 A. Yes. Quite often, yes, they do.

13 Q. How about -- you've got the normal person
14 depicted there, how about the person with
15 restrictive lung disease?

16 A. Here you can see the overall volume is
17 lower.

18 Q. They have less than 4 liters?

19 A. Because the lung is shrinking with
20 scarring. (Noise) Takes very little time. In
21 fact, they get 85 plus percent of this trip out in
22 one second. This normal can only do about 70 to 75
23 percent.

24 Q. They have no problem, there's no
25 obstruction in their airways?

1 A. These?

2 Q. Yes.

3 A. No.

4 Q. So they can get it all out, there's just

5 nothing in there?

6 A. There's not that much in there, and it's

7 just not obstructed.

8 Q. Now, did Ms. Fontana have these flow --

9 A. -- volume curves.

10 Q. -- volume curving done?

11 A. She did.

12 Q. Did she have a bunch of them done?

13 A. She did.

14 Q. I'd like to go to the 6-12-2000 flow

15 volume curve, if you don't mind.

16 You've seen this before?

17 A. I have.

18 Q. This is from Jackson Memorial Hospital?

19 A. I viewed all of her lung function tests.

20 Yes.

21 Q. Can you explain to the jury why -- this is

22 the chart we're looking at, right?

23 A. It is.

24 Q. Why is there one below the line?

25 A. That's for the breath in. You blow out,

1 and now the flow is in the opposite direction, so
2 that's the, coming back in. (Noise)

3 Q. Now, that chart looks just like this
4 chart, right? In other words, the baseline is a
5 potential -- they've got it actually all the way out
6 to 9-plus liters, right?

7 A. Right.

8 Q. And again, they have the same --

9 A. -- flow scale.

10 Q. -- flow scale.

11 And how much inspiration, how much could
12 Ms. Fontana bring in?

13 A. The same amount she could get out. It's
14 about really less than two liters.

15 Q. So you're able to see on this flow chart
16 that she was only able to inspire less than three
17 liters?

18 A. Actually her total lung capacity was
19 only -- was under three liters. Her vital capacity
20 was under two liters.

21 Q. And how long did it take her to get all
22 that air out?

23 A. She got it out quite fast. About 90
24 percent of the trip was made in one second.

25 Q. Did she have any left over?

1 A. She has a small residual volume.

2 Q. What is that consistent with?

3 A. Restrictive.

4 Q. Is there any indication on this flow
5 chart --

6 What do you call it, flow volume chart?

7 A. Flow volume chart, yes.

8 Q. Any indication there of an obstructive
9 feature to her lung disease?

10 A. None.

11 Q. What disease is that flow chart consistent
12 with?

13 A. It's consistent with, amongst other
14 things, sarcoid.

15 Q. In this woman, what does it indicate?

16 A. Sarcoid.

17 Q. Does it indicate any presence of
18 emphysema, chronic bronchitis, COPD?

19 A. No, it does not.

20 Q. Can we pull up the interpretation of this
21 flow volume chart by the doctor who did it?

22 You saw that Dr. Fertel interpreted this
23 flow volume chart as part of an overall
24 interpretation of the pulmonary function test,
25 right?

1 A. Yes.

2 Q. Is doing a flow volume chart part of doing
3 a complete pulmonary function test?

4 A. Yes. Often.

5 Q. And can you read this for the jury?

6 A. Yes. Severe restrictive changes.
7 Diffusing capacity is severely reduced. Arterial
8 blood gas at rest on room air reveal low oxygen and
9 a widened difference between the alveola; and the
10 alveolar gradient for oxygen.

11 Q. Does Dr. Fertel state whether this is
12 restrictive or obstructive pattern?

13 A. He states specifically restrictive.

14 Q. Any indication that there's any hint of an
15 obstructive characteristic?

16 A. No.

17 Q. And this was done at Jackson Memorial
18 Hospital in connection with the workup for her --

19 A. In line for a lung transplantation.

20 Q. Doctor, did you keep a tally of how many
21 of these flow charts, flow volume charts were
22 performed on Ms. Fontana?

23 A. I counted up, the ones in my hands were
24 about somewhere around a dozen.

25 Q. Did they all have this same characteristic

1 restrictive pattern?

2 A. They did.

3 Q. Did any of them have any indication of an
4 obstructive feature consistent with emphysema or
5 COPD or chronic bronchitis?

6 A. They did not.

7 Q. So if we were to look at them all, they'd
8 all look like this?

9 A. Pretty much, except the lung is shrinking
10 more and more, still severely restricted. But the
11 lung is progressively shrinking.

12 Q. That's the nature of sarcoidosis?

13 A. Nature of the unlucky 15 to 20 percent
14 that go on to progression, yes.

15 Q. Doctor, we've talked a little bit about
16 pulmonary function tests. Ms. Fontana had pulmonary
17 function tests performed ever since the late '80s,
18 correct?

19 A. Yes.

20 Q. Can you describe for the jury what
21 happens, how a pulmonary function test is performed?

22 A. Well, in a sense, we went over it with
23 these flow volume curves. But you take a big breath
24 out, all the way to the top and blow out as hard and
25 as fast as you can.

1 That's a so-called forced vital capacity.
2 It was probably best illustrated by Walt Disney,
3 when he had the wolf trying to blow down the brick
4 house with the three little pigs, where he took a
5 big breath in and blew out as hard and as fast as he
6 could. He couldn't do much to the brick house.

7 It's a single maneuver that requires that
8 you push hard and fast on cue so that you can get
9 the timing and the volume that your lungs can
10 produce into that measuring device called a
11 spirometer.

12 Q. Are there other facets to the pulmonary
13 function test other than the inspiration and
14 expiration?

15 A. There are other facets. You can do a
16 so-called transfer factor for carbon monoxide.

17 Q. Using simple terms for people like me, can
18 you explain what that is?

19 A. Carbon monoxide, you know it's a poisonous
20 gas. One of the reasons it's so poisonous is it
21 combines with our blood very strongly and squeezes
22 out oxygen. So you don't give a poisonous amount,
23 you give just a trace amount that you can measure,
24 so that you can assess how the lung transfers this
25 gas, which has many characteristics similar to

1 oxygen.

2 So it gives you an idea of how much
3 diffusion can go across the lung. So that's one.
4 And then you put in a gas that the body doesn't make
5 and doesn't take up, doesn't give off to measure the
6 volume of the lung.

7 So you get a total lung capacity and the
8 ability to transfer gas across the membranes between
9 the alveoli and the blood vessels.

10 Q. All right. You've indicated Ms. Fontana
11 has had pulmonary function tests ever since the late
12 '80s, right?

13 A. Yes, I think that's right, '89.

14 Q. I'd like to pull up, I think it's about
15 the earliest pulmonary function test that we have,
16 one by Dr. Adelman, dated 2-8-89.

17 I think you may have a chart of them at
18 your hand. It's a little easier for you to read. I
19 know these numbers are tiny for people in the jury
20 box, I'm not even attempting to get them to read
21 them. But could you just tell this jury, the issues
22 in this case is, does she have sarcoidosis or does
23 she have something else? That's one of the issues.
24 Can you tell me what lung values, what pulmonary
25 function test values are important in order to

1 determine whether she has a restrictive disease,
2 obstructive disease or combination of the two?

3 A. Sure. We were talking earlier about how
4 fast you could get that trip completed and the
5 restrictive was really fast.

6 The amount gotten out in one second, right
7 here, divided by the value of the whole vital
8 capacity.

9 Q. That's the FEV1 --

10 A. -- FVC ratio, a percent, 90 percent in one
11 second, that is 111 percent of predicted. Because
12 the predicted is only 81. So that says there is
13 no obstruction.

14 Normal would get out only 81 percent. And
15 she got out 90. And it's a small vital capacity.
16 Should be 3.5 liters, and only 2.2.

17 Q. So that demonstrates her lung has shrunk?

18 A. Her lung has shrunk and her airways are
19 open.

20 Q. Clear, gets it all out?

21 A. Yes.

22 Q. Can we see what interpretation of this
23 pulmonary function test Dr. Adelman made?

24 A. He read moderately severe restrictive lung
25 disease.

1 Q. Do you have the Conclusion portion right
2 there?

3 A. Yes. No evidence of airway obstruction.

4 Q. What does that mean?

5 A. That means that there's no impediment to
6 air entering and leaving the lung.

7 Q. No emphysema?

8 A. No obstruction.

9 Q. No chronic bronchitis?

10 A. No obstruction.

11 Q. No COPD?

12 A. No.

13 Q. It says: No change post bronchodilator.
14 What's the significance of that?

15 A. Well, many times with an obstructive lung
16 disease there's -- the airways are surrounded by a
17 little series of muscles that, if they go into
18 spasm, can produce wheezing and uncomfortable.
19 That's the primary lesion, the primary process in
20 asthma, along with inflammation. People with
21 obstructive airway disease often have a reversible
22 component, that is, they give a bronchodilator.
23 These muscles relax and the flow rate can improve.
24 Apparently in this study there was no change, after
25 bronchodilators.

1 Q. What is the third conclusion he comes to?

2 A. Lung volumes confirm moderately severe
3 restrictive lung disease.

4 Q. That is sarcoidosis?

5 A. Sarcoidosis is one of those that can do it
6 and certainly in this case did.

7 Q. The fourth item, gas transfer is
8 diminished as well, is that significant?

9 A. That is. And that was the carbon monoxide
10 test I was telling you about, yes. It's quite low.

11 Q. And what is the final conclusion
12 Dr. Adelman came to?

13 A. Well, given the history of sarcoidosis,
14 these findings are consistent with pulmonary
15 interstitial involvement, seen with this disease,
16 and I would agree with it.

17 Q. Does he indicate there is absolutely any
18 indication of some sort of obstructive disease going
19 on?

20 A. No, he does not.

21 Q. Now, I'm not going to go through every one
22 of the pulmonary function tests that were done on
23 Ms. Fontana, but I'd like to go to 9-22-95.

24 And while Pete gets us there, in between,
25 did she have multiple PFTs?

1 A. Several, yes.

2 Q. Were they all the same?

3 A. They were.

4 Q. In terms of what they showed as
5 Dr. Adelman's?

6 A. Except for worsening of the shrinking
7 process, none showed any obstruction.

8 Q. Her restriction gets worse over time?

9 A. It does.

10 Q. Is that consistent with the worsening of
11 her sarcoidosis?

12 A. It is.

13 Q. That's very faint. This is
14 Dr. Coopersmith's September 22nd, 1995 pulmonary
15 function test, is that correct?

16 A. Yes.

17 Q. Can you tell us again what values are
18 important on this pulmonary function test study?

19 A. Well, the same one, if you take how much
20 she can get out in one second, in comparison to how
21 much she can get out in total.

22 Q. The FEV1/FVC?

23 A. Yes. She's predicted to get about 76
24 percent and she gets out 89 percent.

25 Q. What does that tell you?

1 A. That there is no obstruction.

2 Q. And what is her lung volume at that point?

3 A. It is down. Let's see if I can get the
4 total lung capacity. It should be 5.53 liters and
5 it's 3.24 liters, so the total lung capacity is
6 down. It's decreased.

7 Q. What is this indicative of in terms of
8 type of disease of Ms. Fontana?

9 A. Restrictive.

10 Q. Any indication of obstructive?

11 A. None whatsoever.

12 Q. Let's take a look at what Dr. Coopersmith
13 had to say.

14 His interpretation was --

15 A. Moderate restrictive disease.

16 Q. Moderate decrease in DLCO and no change
17 after bronchodilators, right?

18 A. Correct.

19 Q. Is that -- what's he telling us there?

20 MR. HUNTER: Well, Judge, I object to
21 this. What he's telling us, the record speaks
22 for itself.

23 THE COURT: Okay, overruled.

24 BY MR. REILLY:

25 Q. Go ahead and answer, please.

1 A. Give me the question again, please,

2 Q. What's he telling us? What does that say?

3 A. That there's restrictive lung disease,
4 that there's no obstruction.

5 Q. Let's go to -- now, you've looked at, this
6 is 9-22-95, right? This is September 22nd, 1995?

7 A. That is correct.

8 Q. You're familiar, you've looked at all the
9 X-rays and CT scans in this case, right?

10 A. I have.

11 Q. You're familiar with the CT scan that was
12 taken and interpreted 12-23-95?

13 A. 12-23-96.

14 Q. I'm sorry.

15 A. Yes, I'm familiar with that.

16 Q. Can we bring that up?

17 Doctor, can you tell us, have you reviewed
18 this CT scan?

19 A. I have.

20 Q. And can you tell me what interpretation of
21 this CT scan you made?

22 A. I thought she had severe scarring of the
23 upper lung regions with those holes, those cysts
24 that we had talked about earlier, and the lymph
25 nodes were still present around the eye of the lung,

1 the hilus of the lung.

2 Q. You know, and it's already been discussed
3 at length in front of this jury, that Dr. Gardiner
4 interpreted, makes mention in his report of severe
5 COPD. Correct?

6 A. He does.

7 Q. Do you share that opinion?

8 A. I certainly do not.

9 Q. The holes that he reports in his report,
10 in your opinion, what are those holes due to?

11 A. Sarcoidosis.

12 Q. Were they the same holes that you showed
13 this jury on that depiction of the lung with the
14 holes at the top of the lung?

15 A. Very similar.

16 Q. Now, was there a pulmonary function test
17 done very shortly after Dr. Gardiner makes this
18 interpretation of this CT film?

19 A. There was.

20 Q. Was it done on 1-6-97, about a week and a
21 half, two weeks later?

22 A. It was.

23 MR. REILLY: Can we pull that up, please?

24 Q. Can you tell me what is significant in
25 terms of the values of this pulmonary function test?

1 A. Well, it's the same one we talked about
2 before. If you take the amount that's gotten out in
3 one second as a ratio or percent of the amount that
4 can be gotten out, she's at 86 to 89 percent, where
5 the predicted is only 79 percent. So this is super
6 fast.

7 Q. Doctor, thinking back to that CT scan, was
8 there anything about the appearance of the holes
9 themselves that told you whether or not they were
10 caused by COPD or caused by sarcoidosis?

11 A. Yes. I thought the walls were thickened
12 and adjacent to regions of scarring, so-called
13 fibrosis.

14 Q. Does that occur in emphysema?

15 A. No, it does not. In fact, that's an
16 exclusionary from the American Thoracic Society
17 definition, without evident fibrosis, and she has
18 very evident fibrosis.

19 Q. A week and a half, two weeks later, does
20 this pulmonary function test indicate there is any
21 kind of obstructive disease going on in Ms. Fontana?

22 A. None.

23 Q. Is there any indication that there's
24 anything going on in her lung other than a
25 restrictive disease?

1 A. No.

2 Q. How was this pulmonary function test
3 interpreted by the doctor caring for her at the
4 time?

5 A. Well, let's see.

6 Now, this is a lesson in physician
7 penmanship. Can you read that signature?

8 A. I can make a stab at it. "Anstad" or
9 something. I don't know.

10 Q. In any event, a physician read it, right?

11 A. It did.

12 Q. And what interpretation did that physician
13 make of this pulmonary function test?

14 A. Restrictive lung disease with associated
15 diffusion defect.

16 Q. Is there any indication there by that
17 physician that this pulmonary function test showed
18 an obstructive disease of any kind?

19 A. No. And if you go on to mechanics in that
20 same report, under Mechanics, moderate restriction,
21 not obstructed.

22 And I agree with that reading.

23 Q. So this physician has indicated there
24 isn't any obstruction?

25 A. He has.

1 Q. Would that be consistent or inconsistent
2 with an entry by Dr. Gardiner, a week and a half
3 earlier, of severe COPD?

4 A. No, it would not.

5 Q. Not consistent?

6 A. Not consistent at all.

7 Q. Let's look at the discharge summary by
8 Dr. Coopersmith for this patient at this point in
9 time.

10 Doctor, the jury has already seen this,
11 but Dr. Coopersmith is the pulmonologist caring for
12 Ms. Fontana at this point, correct?

13 A. He is.

14 Q. And what diagnosis does he make of her,
15 even though Dr. Gardiner has written "severe COPD"
16 on his X-ray interpretation of the CT scan?

17 A. Well, he writes: Sarcoidosis with
18 progressive pulmonary fibrosis Stage IV.

19 Q. Any indication of COPD?

20 A. None.

21 Q. Or chronic bronchitis?

22 A. No.

23 Q. Or emphysema?

24 A. No.

25 MR. REILLY: Your Honor, this is a pretty

1 good break point.

2 THE COURT: It's about five minutes to
3 12:00. So I think I agree with you.

4 Ladies and gentlemen, it's time for lunch.
5 I know you don't want to hear my instructions
6 again, so I won't give them to you. Just enjoy
7 lunch and we'll see you at 1:30.

8 (The jurors exited the courtroom.)

9 (A recess was taken.)

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Taylor, Jonovic, White & Gendron